CLAIMS

1. A method for forming an index, said index including a subset of instruments selected from a universe of N instruments, said method comprising the steps of:

a) assigning a covariance matrix composed of a variance for each of said instruments and a correlation matrix to said universe;

b) removing one of said instruments from said universe;

c) calculating a residual variance for each of said instruments remaining in said universe;

d) calculating a residual variance for said universe based on said residual variance for each of said instruments and said correlation matrix;

e) reinstating said instrument into said universe;

f) repeating steps b-e for each instrument in the universe;

g) inserting into said index said one of said instruments for which said residual variance of said universe is minimized;

h) eliminating from said universe said one of said instruments for which said residual variance of said universe is minimized; and

i) repeating steps b-h until said index is formed.

2. The method of claim 1, wherein the step of assigning a covariance matrix includes the steps of:

calculating a variance for each of said instruments in said universe; and

assigning a correlation value between a plurality of pairs of said instruments in said universe.

3. The method of claim 2, wherein some of said instruments in said universe are associated with an entity and wherein the step of assigning a correlation value further comprises the step of:

assigning a correlation value between each of said some of said instruments associated with said entity.

4. The method of claim 3, wherein said correlation value between each of said some of said instruments associated with said entity is identical.

5. The method of claim 2, wherein some of said instruments in said universe are within a sector in a country and wherein the step of assigning a correlation value further comprises the step of:

assigning a correlation value between each of said some of said instruments within said sector in said country.

6. The method of claim 5, wherein said correlation value between each of said some of said instruments within said sector in said country is identical.

7. The method of claim 2, wherein some of said instruments in said universe are within a first sector and some of said instruments in said universe are within a second sector and wherein the step of assigning a correlation value further comprises the step of:

assigning a correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector.

8. The method of claim 7, wherein said correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector is identical.

9. The method of claim 2, wherein some of said instruments in said universe are associated with a first country and some of said instruments in said universe are associated with a second country and wherein the step of assigning a correlation value further comprises the step of:

assigning a correlation value between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country.

10 The method of claim 9, wherein said correlation value between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country is identical.

11. The method of claim 2, wherein some of said instruments in said universe are associated with an entity, some of said instruments in said universe are within a first sector in a first country, some of said instruments in said universe are within a second sector in a second country, some of said instruments in said universe are associated with a first country and some of said instruments in said universe are associated with a second country and wherein the step of assigning a correlation value further comprises the steps of:

assigning a correlation value between each of said some of said instruments associated with said entity;

assigning a correlation value between each of said some of said instruments within said first sector in said first country;

assigning a correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector; and

assigning a correlation value between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country.

12. The method of claim 11, wherein said correlation value between each of said some of said instruments associated with said entity is identical, said correlation value between each of said some of said instruments within said first sector is identical, said correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector is identical and said correlation value between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country is identical.

13. The method of claim 1, wherein the step of calculating a residual variance of the instruments remaining in said universe includes the step of:

calculating $RESVAR^{m}(R)=\sum_{i\notin K}(\sigma_i^m)^2+\sum_{i\notin K}\sum_{j\neq i, j\notin K}\sigma_i^m\sigma_j^m\rho_{i,j}$

where

$$\sigma_i^m=\sigma_i^0\sqrt{(1-\rho_{i,k_1}^2)(1-\rho_{i,k_2}^2)\ldots(1-\rho_{i,k_m}^2)},\ i\notin K=\{k_1,k_2,\ldots,k_m\}.$$

14. The method of claim 1, wherein said index is formed when a predetermined number of instruments in the universe are inserted into said index.

15. The method of claim 1, wherein said index is formed when a predetermined percentage of said instruments in the universe are inserted into said index.

16. The method of claim 15, wherein said predetermined percentage is a percentage of said universe of N instruments on a weighted basis.

17. The method of claim 1, further comprising the step of:

calculating an original dv01 of said universe before the removing one of said instruments step;

wherein the step of inserting into said index said one of said instruments for which said residual variance is minimized includes the step of:

calculating a remaining dv01 of said universe; and

wherein said index is formed when said remaining dv01 of said universe is a predetermined percentage of said original dv01 of said universe.

18. The method of claim 1, wherein said instruments are fixed income instruments.

19. The method of claim 1, wherein said instruments are equities.

20. The method of claim 1, wherein said instruments are FX securities.

21. Computer executable program code residing on a computer-readable medium, the program code comprising instructions for causing the computer to:

form an index, said index including a subset of instruments selected from a universe of N instruments:

a) assign a covariance matrix composed of a variance for each of said instruments and a correlation matrix to said universe;

b) remove one of said instruments from said universe;

c) calculate a residual variance for each of said instruments remaining in said universe;

d) calculate a residual variance for said universe based on said residual variance for each of said instruments and said correlation matrix;

e) reinstate said instrument into said universe;

f) repeat steps b-e for each instrument in the universe;

g) insert into said index said one of said instruments for which said residual variance of said universe is minimized;

h) eliminate from said universe said one of said instruments for which said residual variance of said universe is minimized; and

i) Repeat steps b-h until said index is formed.

22. The computer executable program of claim 21, wherein the program code additionally causes the computer to:

calculate a variance for each of said instruments in said universe; and

assign a correlation value between a plurality of pairs of said instruments in said universe.

23. The computer executable program of claim 22, wherein some of said instruments in said universe are associated with an entity and wherein the program code additionally causes the computer to:

assign a correlation value between each of said some of said instruments associated with said entity.

24. The computer executable program of claim 23, wherein said correlation value between each of said some of said instruments associated with said entity is identical.

25. The computer executable program of claim 22, wherein some of said instruments in said universe are within a sector in a country and wherein the program code additionally causes the computer to:

assign a correlation value between each of said some of said instruments within said sector in said country.

26. The computer executable program of claim 25, wherein said correlation value between each of said some of said instruments within said sector in said country is identical.

27. The computer executable program of claim 22, wherein some of said instruments in said universe are within a first sector and some of said instruments in said universe are within a second sector and wherein the program code additionally causes the computer to:

assign a correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector.

28. The computer executable program of claim 27, wherein said correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector is identical.

29. The computer executable program of claim 22, wherein some of said instruments in said universe are associated with a first country and some of said instruments in said universe are associated with a second country and wherein the program code additionally causes the computer to:

assign a correlation value between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country.

30 The computer executable program of claim 29, wherein said correlation value between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country is identical.

31. The computer executable program of claim 22, wherein some of said instruments in said universe are associated with an entity, some of said instruments in said universe are within a first sector in a first country, some of said instruments in said universe are within a second sector in a second country, some of said instruments in said universe are associated with a first country and some of said instruments in said universe are associated with a second country and wherein the program code additionally causes the computer to:

assign a correlation value between each of said some of said instruments associated with said entity;

assign a correlation value between each of said some of said instruments within said first sector in said first country;

assign a correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector; and

assign a correlation value between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country.

32. The computer executable program of claim 31, wherein said correlation value between each of said some of said instruments associated with said entity is identical, said correlation value between each of said some of said instruments within said first sector is identical, said correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector is identical and said correlation value

between each of said some of said instruments associated with said first country and each of said some of said instruments associated with said second country is identical.

33. The computer executable program of claim 21, wherein the program code additionally causes the computer to:

calculate $RESVAR^m(R) = \sum_{i \notin K} (\sigma_i^m)^2 + \sum_{i \notin K} \sum_{j \neq i, j \notin K} \sigma_i^m \sigma_j^m \rho_{i,j}$

where

$$\sigma_i^m = \sigma_i^0 \sqrt{(1-\rho_{i,k_1}^2)(1-\rho_{i,k_2}^2)\ldots(1-\rho_{i,k_m}^2)},\ i \notin K = \{k_1, k_2, \ldots, k_m\}.$$

34. The computer executable program of claim 21, wherein said index is formed when a predetermined number of instruments in the universe are inserted into said index.

35. The computer executable program of claim 21, wherein said index is formed when a predetermined percentage of said instruments in the universe are inserted into said index.

36. The computer executable program of claim 35, wherein said predetermined percentage is a percentage of said universe of N instruments on a weighted basis.

37. The computer executable program of claim 21, wherein the program code additionally causes the computer to:

calculate an original dv01 of said universe before one of said instruments is removed from said universe ;

calculate a remaining dv01 of said universe after one of said instruments is inserted into said index; and

wherein said index is formed when said remaining dv01 of said universe is a predetermined percentage of said original dv01 of said universe.